
Notes on the Lowiaceae, Musaceae, and Zingiberaceae for the *Flora of China*

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ABSTRACT. A new combination in the Lowiaceae, *Orchidantha chinensis* T. L. Wu var. *longisepala* (D. Fang) T. L. Wu, as well as a new species, *Alpinia jianganfeng* T. L. Wu, and two new combinations, *Amomum petaloideum* (S. J. Tong) T. L. Wu and *Roscoea cautleoides* Gagnepain var. *pubescens* (Z. Y. Zhu) T. L. Wu, in the Zingiberaceae are proposed. Eight species names in the Lowiaceae, Musaceae, and Zingiberaceae are reduced to synonymy.

The following novelties are proposed to make the names available for the treatments of Lowiaceae, Musaceae, and Zingiberaceae in the forthcoming volume 24 of the *Flora of China*.

LOWIACEAE

Orchidantha chinensis T. L. Wu var. **longisepala** (D. Fang) T. L. Wu, comb. et stat. nov. Basionym: *Orchidantha longisepala* D. Fang, Gui-haia 16: 4. 1996. TYPE: China. Guangxi: Shangsi, Baibao, Nadang, Shiwan-dashan, 370 m, 9 Mar. 1975, D. Fang & X. X. Chen 35125 (holotype, GXMT; isotypes, IBK, IBSC, PE).

Orchidantha longisepala differs from *O. chinensis* only in the flower size. The former has sepals 12–17 × 1.9–3.2 cm, a labellum 12–17 × 2–2.3 cm, and two lateral petals 2.8–3.2 cm long. In contrast, *O. chinensis* has sepals ca. 9.5 × 1.5–2 cm, a labellum ca. 9 × 0.8 cm, and two lateral petals ca. 2 cm long. These quantitative differences can justify the recognition of *O. longisepala* at only varietal rank.

MUSACEAE

Musa balbisiana Colla, Men. Gen. Musa 56. 1820.

Musa dechangensis J. L. Liu & M. G. Liu, Act. Bot. Yunnan. 9: 163. 1987. Syn. nov. TYPE: China. Sichuan: Dechang, Xiaogao, 1380 m, 2 Dec. 1984, J. L. Liu & J. Q. Xiao 179 (holotype, XIAS).

Musa lushanensis J. L. Liu, Acta Bot. Yunnan. 11: 171. 1989. Syn. nov. TYPE: China. Sichuan: Lushan Xian, Shuangshixiang, 700 m, 3 Oct. 1987, J. L. Liu & Z. H. Tang 181 (holotype, XIAS).

Musa luteola J. L. Liu, Invest. & Stud. Nat. 10: 41. 1990. Syn. nov. TYPE: China. Sichuan: Yaan, Lushan Xian, Shuangshixiang, 700 m, 3 Oct. 1987, J. L. Liu & Z. H. Tang 180 (holotype, XIAS).

Musa dechangensis, *M. lushanensis*, and *M. luteola* are indistinguishable from *M. balbisiana* in almost all aspects of bracts, fruit, and seeds. The slight differences given by the authors of these three names (e.g., having yellowish bracts or lacking the fruit beak) can be observed within *M. balbisiana* and, therefore, do not support the recognition of these three variants as independent species.

Ensete wilsonii (Tutcher) Cheesman, Kew Bull. 2: 103. 1948.

This species was treated by Li (1981) as *Musa wilsonii* Tutcher. However, a study of the figure and the description in the original publication of *M. wilsonii* clearly reveals that the species should be placed in *Ensete* and not *Musa*. *Ensete*, including *E. wilsonii*, differs from *Musa* in having a sympodial swollen stem base (vs. stoloniferous stem base), a 3-lobed compound tepal (vs. 5-toothed compound tepal), green (vs. colored) bracts, and seeds 1–1.3 (vs. less than 0.6) cm in diameter.

ZINGIBERACEAE

Alpinia hainanensis K. Schumann, in Engler, Pflanzenr. IV. 46(Heft 20): 335. 1904.

Alpinia henryi K. Schumann, in Engler, Pflanzenr. IV. 46(Heft 20): 335. 1904. Syn. nov. TYPE: China. Hainan: without locality, Henry 8402 (holotype, B; isotype, K).

Alpinia katsumadai Hayata, Icon. Pl. Formosan. 5: 224. 1915. Syn. nov. TYPE: China. Hainan: without locality, 1910, Katsumada s.n. (holotype, TI).

Alpinia kainantensis Masamune, Trans. Nat. Hist. Soc. Taiwan 33: 28. 1943. Syn. nov. TYPE: China. Hainan (as Kainanto): Man-nei, 27 Nov. 1940, Masamune & Fukuyama 174 (holotype, TI).

The types of all of the above four names were collected from Hainan Island. A comparison of the original descriptions, as well as photographs of the type

collections of both *Alpinia hainanensis* and *A. henryi*, cast no doubt that all four represent a single species.

Alpinia stachyodes Hance, J. Linn. Soc., Bot. 13: 126. 1873.

Alpinia densibracteata T. L. Wu & Senjen, Acta Phytotax. Sin. 16(3): 32. 1978. Syn. nov. TYPE: China. Guangdong: Long Men, W. T. Tseng 25332 (holotype, IBSC).

An examination of the types of *Alpinia stachyodes* and *A. densibracteata* reveals that a single species is involved.

Alpinia (subg. *Probolocalyx* K. Schumann) **jianganfeng** T. L. Wu, sp. nov. TYPE: China. Guangdong: Lian Nan Xian, Z. S. Zhu 784 (holotype, IBSC).

Caulis ca. 1 m altus; folia lanceolata vel linear-lanceolata, 20–30 cm longa, 2–4(–6) cm lata; ligula bifida, ca. 2 mm longa, ciliata; spica terminalis, 10–20 cm longa; rhachidi tomentosa; bracteola minuta; calyx cylindricus, apice tridentatus pubescens; corollae tubus 8–10 mm longus, lobis oblongis, 8–10 mm longis, villosus; staminodia lateralia lineares, ca. 2 mm longa; labellum obovatum, 0.7–1.3 mm longum, margine crispatum, apice bifidum; stamen labello longior; capsula globosa 7–8 mm diam., pubescens, apice calyce persistenti coronata; semina 5–6.

Plants herbaceous. Stems ca. 1 m long. Leaves sessile or with petioles to 4 cm; sheath glabrous; ligule ca. 2 mm long, 2-cleft, ciliate; leaf blade lanceolate to linear-lanceolate 20–30 cm long, 2–4(–6) cm wide, glabrous except for hispid subapical margin, base attenuate, apex narrowly caudate. Spikes terminal, erect, 10–20 cm long; rachis tomentose; bracts absent; bracteoles minute. Flowers in clusters of 3. Calyx cylindric, apex 3-cleft, pubescent outside. Corolla tube subequal or slightly longer than calyx; lobes oblong, 8–10 mm long, villous outside. Lateral staminodes linear, ca. 2 mm long. Labellum obovate, 0.7–1.3 cm long, margin crispat, apex 2-cleft. Stamen longer than labellum; anther ca. 4 mm. Ovary globose, pubescent. Capsule globose, 7–8 mm diam., pubescent, apex crowned with persistent calyx. Seeds 5 or 6.

Flowering April–June, fruiting June–November.

Alpinia jianganfeng is closely related to *A. bambusifolia* C. F. Liang & D. Fang, from which it differs in having glabrous sheaths, spikes 10–20 cm long, flowers in fascicles of 3, and a labellum 7–13 mm long with a crispat margin. In contrast, *A. bambusifolia* has pubescent sheaths, spikes 1.5–6 cm long, flowers in pairs or solitary along upper parts of the spike, and an entire labellum ca. 9 mm long.

Alpinia jianganfeng was misidentified by Wu and Chen (1981) as *A. stachyodes* Hance. However, the latter species has tomentose sheaths, ligules ca. 1 cm long, ovate or lanceolate bracts 1.5–2.5 cm long, lanceolate bracteoles 5–10 mm long, and a rhombic-ovate obscurely 3-lobed labellum. Plants of *A. jianganfeng* have glabrous sheaths, ligules ca. 2 mm long, no bracts, minute bracteoles, and an obovate 2-cleft labellum.

Paratypes. CHINA (all specimens at IBSC). **Guangdong:** Lian Nan Xian, T. S. Chu 784; Nan Xiong Xian, L. Deng 6375 (IBS); Tai San Xian, B. H. Chen 881; Xin Feng Xian, H. G. Ye 1000; Ying De Xian, C. S. Niu 8031; Yu Nan Xian, G. C. Zhang 2760. **Guangxi:** Bai Shi Xian, Y. W. Taam 8; Cang Wu Xian, S. H. Chun 229138; He Xian, Y. K. Li; Rong Xian, S. H. Chun 229138. **Hong Kong:** W. Y. Chun 4876; Y. Tsiang 647. **Hunan:** Jiang Hua Xian, B. G. Li 05328; Yi Zhang Xian, S. H. Chun 2900. **Jiangxi:** Hui Chang Xian, C. M. Hu 3393; Le Yi Xian, M. X. Nie 8609; Xu Wu Xian, C. M. Hu 1658; Yong Xin Xian, S. K. Lai 4978.

Amomum petaloideum (S. Q. Tong) T. L. Wu, comb. nov. Basionym: *Paramomum petaloideum* S. Q. Tong, Acta Bot. Yunnan. 7: 310. 1985. TYPE: China. Yunnan: Mengla Xian, Meng-lun, 620 m, 10 June 1981, S. Q. Tong 24801 (holotype, YNTBI).

In his original description of the monotypic *Paramomum*, Tong (1985) compared it with *Costus*. However, *P. petaloideum* has all the features of *Amomum*.

Roscoea cautleoides Gagnepain var. **pubescens** (Z. Y. Zhu) T. L. Wu, comb. et stat. nov. Basionym: *Roscoea pubescens* Z. Y. Zhu, Acta Phytotax. Sin. 26: 315. 1988. TYPE: China. Sichuan: Xichang, 2000 m, J. L. Zhang 195 (holotype, EMA).

Except for having pubescent sheaths and abaxial leaf surfaces and slightly longer fruits, plants of *Roscoea pubescens* are indistinguishable from those of *R. cautleoides*.

Roscoea humeana I. B. Balfour & W. W. Smith, Notes Roy. Bot. Gard. Edinburgh 9: 122. 1916.

Roscoea sichuanensis Miau, Act. Sci. Nat. Univ. Sunyiatseni 34(3): 81. 1995. Syn. nov. TYPE: China. Sichuan: Mt. Siga, overlooking Yalang River, N Koredi, 12,000 ft., May 1932, J. F. Rock 23852 (holotype, SYS; isotype, A).

An examination of the type material of *Roscoea sichuanensis* reveals that the plant is indistinguishable from *R. humeana*.

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